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STARLAB SPACE: A HOSPITALITY-INSPIRED PARADIGM FOR COMMERCIAL SPACE
STATIONS IN COLLABORATION WITH HILTON WORLDWIDE**Abstract**

In the past decade, the eruption into the era of commercial spaceflight and space exploration has witnessed an exponential growth, paving the way for innovative partnerships. One example of such collaboration is the design of Starlab—a commercial space station developed in partnership between Starlab Space (a Joint Venture of Voyager Space and Airbus) and Hilton Hotels. From commercial launch efforts, to building new homes for humans on orbit initiated by commercial entities, it is now more crucial than ever to bridge the gaps between human-centred design and spacecraft technologies.

Starlab Space Station, stands on multiple core mission pillars, one of which is a focus on human-centred design, to ensure optimal crew health and performance, ranging from physiological to psychological well-being, as well as operational efficiency. One of the novel ways Starlab brings this vision to fruition is by its unique habitat zone; These spaces provide astronauts with opportunities for relaxation, leisure, and socialization, contributing to a positive and cohesive team dynamic.

The partnership with Hilton brings a unique approach to recreational spaces within Starlab – where crewmembers will rest, eat, exercise, and socialize. Incorporating lessons learned from Hilton’s hospitality know-how, Starlab features communal areas designed to promote social interaction and alleviate the psychological challenges associated with isolation during prolonged space missions.

By synergizing space technology with Hilton’s expertise, Starlab not only prioritizes astronaut well-being but also sets a new standard for operational efficiency in space habitats. As humanity embarks on the next frontier of space exploration, the Hilton-inspired Starlab presents a compelling model for the integration of comfort, efficiency, and sustainability in the design of future commercial space environments. Additionally, this layout has been carefully engineered to accommodate for human safety, health, and comfort, while maximizing psychological and physiological well-being of the Starlab astronauts.

This paper delves into the distinctive advantages of Starlab’s habitat which combines cutting-edge space technology with Hilton’s expertise in ergonomic design and operational efficiency to create an unprecedented space environment for future astronauts. We will outline the human-centred design considerations and the importance of building around and for the human user. Lastly, we will showcase how Starlab team has diligently realized these considerations by connecting architecture and design already utilized in Earth-based design to that which will enable the next generation of astronauts to safely orbit the Earth in their new home.